

50 CFR Part 17**Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for *Solidago albopilosa* (White-haired Goldenrod)****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule.

SUMMARY: The Service determines *Solidago albopilosa* to be a threatened species under authority of the Endangered Species Act of 1973 (Act), as amended. This species is known only from rockhouses and beneath overhanging ledges primarily in the Daniel Boone National Forest, Red River Gorge area of Menifee, Powell, and Wolfe Counties, Kentucky. All known population of the species are threatened by trampling from recreational use of their specific habitat within the National Forest. This action will implement the Federal protection provided by the Act for *Solidago albopilosa*.

EFFECTIVE DATE: May 9, 1988.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801.

FOR FURTHER INFORMATION CONTACT: Mr. Robert R. Currie at the above address (704/259-0321 or FTS 672-0321).

**SUPPLEMENTARY INFORMATION:
Background**

Solidago albopilosa E.L. Braun (white-haired goldenrod) is an upright-to-slightly-arching herbaceous plant that attains a height of 3 to 10 decimeters (12 to 39 inches). Braun (1942) described this species based on specimens discovered in the summer of 1940 in the Red River Gorge area of Menifee and Powell Counties, Kentucky. The leaves of *Solidago albopilosa* are prominently veined with a dark green upper surface and a pale underside. They vary in length from 6 to 10 centimeters (2.5 to 4.0 inches), with the larger leaves closer to the base of the stem. The stem is cylindrical and densely covered with fine white hairs. Clusters of small, yellow flowers begin blooming in late August. Pale brown, pubescent, oblong achenes (dry single-seed fruits) appear in October. *Solidago albopilosa* can be distinguished from its close relative *Solidago flexicaulis* by its generally downy appearance in contrast to the slick, smooth appearance of *S. flexicaulis* (Medley 1980).

The species is endemic to outcroppings of Pottsville sandstone in the Red River Gorge area of Menifee, Powell, and Wolfe Counties, Kentucky. Usually it is found in rockhouses (natural, shallow, cave-like formations) and beneath overhanging ledges. The plants grow behind the dripline in loose sand, on the floor, in crevices, and on ledges along the walls of rockhouses. Associated rockhouse species include round-leaved catchfly (*Silene rotundifolia*) and alumroot (*Heuchera parviflora*). Associated overstory species of the mixed mesophytic forest are oaks (*Quercus* spp.), maples (*Acer* spp.), and mountain-laurels (*Kalmia* spp.) (Kral 1983).

Solidago albopilosa is only found within Kentucky's Red River Gorge.

Most of this small area is within Daniel Boone National Forest and has been designated a National Geological Area (36 CFR 294.1). The Forest Service is planning to acquire the most significant of the several small, private inholdings within the Gorge in the future. One population segment of *Solidago albopilosa* occurs within one of these private inholdings. The geological features (rockhouses) with which the species is associated are common within the Red River Gorge; however, only a small percentage of these rockhouses currently supports the species (Andreasen and Eshbaugh 1973; Don Figg, Daniel Boone National Forest, personal communication, 1986).

The unique features and habitat of *Solidago albopilosa* have made it an object of great interest to botanists. Thorough searches of suitable habitat in areas adjacent to the Gorge and in other parts of the state have failed to reveal the presence of any additional populations. (Marc Evans, Kentucky Nature Preserves Commission, personal communication, 1986). *Solidago albopilosa*'s unique habitat is subject to intensive disturbance by recreational visitors to the Gorge (Medley 1980). Rockhouses, including those that support *Solidago albopilosa*, are very popular destinations or sites for hiking, camping, climbing, picnicking, building campfires, and digging for Indian artifacts. These activities have threatened and continue to threaten *Solidago albopilosa*.

Federal government actions on this species began with section 12 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This

report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice (40 FR 27823), which formally accepted the Smithsonian report as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act. By accepting this report as a petition the Service also acknowledged its intention to review the status of the plant taxa named within the report. *Solidago albopilosa* was included in the July 1, 1975, notice of review. On June 16, 1976, the Service published a proposed rule (41 FR 24523) to determine approximately 1,700 vascular plant taxa to be endangered species pursuant to section 4 of the Act; *Solidago albopilosa* was included in this proposal.

The 1978 amendments to the Endangered Species Act required that all proposals over two years old be withdrawn. On December 10, 1979 (44 FR 70796), the Service published a notice withdrawing the proposal of June 6, 1976. On December 15, 1980, the Service published a revised notice of review for native plants (45 FR 82480). *Solidago albopilosa* was included in that notice as a Category-1 species. Category-1 species are those species for which the Service has sufficient biological data to propose to list them as endangered or threatened species.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Solidago albopilosa* because of the acceptance of the 1975 Smithsonian report as a petition. On October 13, 1983; October 12, 1984; October 11, 1985; and October 12, 1986, the Service found that the petitioned listing of *Solidago albopilosa* was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act.

On April 24, 1987, the Service published (52 FR 13797) a proposal to list *Solidago albopilosa* as an endangered species. That proposal constituted the final 1-year finding as required by the 1982 amendments to the Endangered Species Act. The proposal provided information on the species' biology, status, and threats, and the potential implications of listing. The proposal also solicited comments on the status, distribution, and threats to the species.

Summary of Comments and Recommendations

In the April 24, 1987, proposed rule and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting public comment were published in the *Menifee County News* and the *Clay City Times* on May 21, 1987, and in the *Wolfe County News* on May 22, 1987. The Service received five responses to the proposed rule—one from a State commission and four from Federal agencies.

The Kentucky Nature Preserves Commission supported the proposed addition of *Solidago albopilosa* to the Federal threatened and endangered species list.

The U.S. Army Corps of Engineers, Louisville District; the Federal Energy Regulatory Commission; and the Tennessee Valley Authority stated that the addition of this species to the Federal list would not affect any of their projects currently under consideration.

The U.S. Forest Service stated that based upon the current known distribution of the species, the ability of the species to recover from intensive disturbances, and the existence of several remote sites supporting population segments of the plant, that listing the species as threatened rather than endangered should be considered. They further offered their assistance and support to future activities needed to ensure the continued existence of *Solidago albopilosa*.

The Service concurs with the conclusion that *Solidago albopilosa* merits protection under the Act. The Service has reevaluated the available information on the status of, and threats to, this species and believes that threatened, rather than endangered, status is appropriate.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Solidago albopilosa* should be classified as a threatened species. Procedures found at section 4(a)(1) of the Act and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five

factors described in section 4(a)(1). These factors and their application to *Solidago albopilosa* E. L. Braun (white-haired goldenrod) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* *Solidago albopilosa* is only known from a small number of rockhouses in the Red River Gorge of Menifee, Powell, and Wolfe Counties, Kentucky. The species has been extirpated from some of these sites and is being adversely impacted by human activities at most other sites (Medley 1980). A census taken by Medley (1980) resulted in a population estimate of 10,500 individuals. Field work since that time by Forest Service personnel (B. Knowles, personal communication, 1986) has revealed the presence of several additional population segments. These additional segments are located in the more remote and inaccessible portions of the Gorge. Medley (1980) states that all but two of the sites he visited showed some disturbance by recreational use of the gorge. He further reports that J. Varner, a local botanist who has observed the species over several years, believes that *Solidago albopilosa* has been extirpated from numerous rockhouse sites. Recreational activities that directly impact rockhouses and *Solidago albopilosa* include hiking, picnicking, rappelling, camping, and climbing. The presence of Indian artificats within the area, and the damage caused by collectors pursuing them, subjects even the most remote rockhouses to human disturbance (Marc Evans, Kentucky Nature Preserves Commission, personal communication, 1984; D. Figg, personal communication, 1986). Due to its vulnerable position on the floors and walls, *Solidago albopilosa* is especially susceptible to visitor damage. Recreational use of the Red River Gorge is currently at about 240,000 recreational visitor days per year. Management practices designed to reduce recreational use of the rockhouses are needed to ensure the continued existence of the plant.

Solidago albopilosa would also be affected by the proposed Red River Lake project. Though no longer being pursued as a viable project by the U.S. Army Corps of Engineers, the project, if implemented, could adversely affect the species through associated construction and recreation activities. Although the proposed high water level would not inundate the plant's habitat, the project would need to be planned and completed with the protection of *Solidago albopilosa* being a major consideration.

B. Overutilization for commercial, recreational, scientific, or educational purposes. *Solidago albopilosa* is subject to taking and vandalism due to the accessibility of most of the rockhouses and the high rate of visitor use the gorge and particularly the rockhouses receive.

C. Disease or predation. No such threats currently face *Solidago albopilosa*.

D. The inadequacy of existing regulatory mechanisms. Endangered, threatened, and unique plants found on National Forest lands are protected from damage and taking by Federal regulation (36 CFR 261.9). However, limited manpower makes enforcement of this regulation difficult. *Solidago albopilosa* is included as an endangered species on the unofficial list of endangered, threatened, and rare species prepared by the Kentucky Academy of Science, but receives no additional protection from this recognition.

E. Other natural or manmade factors affecting its continued existence. Due to its unique topographic structure, the Red River Gorge experiences different climatic conditions from those found on the Cumberland plateau and landscapes to the east and west (Martin 1976). *Solidago albopilosa* is adapted to the unique combination of climatic, geologic, and topographic conditions present within the Gorge. Even seemingly minor changes in the surrounding forest could impact this shade-tolerant plant directly through drying and erosion and indirectly by increasing competition with less shade-tolerant species (Kral 1983). While no such changes currently threaten the plant, management planning designed to take into account the requirements of the species is needed to ensure its continued existence.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Solidago albopilosa* as threatened. Threatened status is deemed appropriate for this species because of the Federal ownership of most of the lands on which it occurs and the commitment of the Federal agency responsible for managing these lands to take whatever actions are necessary to ensure the continued existence of *Solidago albopilosa*. Critical habitat is not being proposed for the species for the reasons given below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. *Solidago albopilosa* occurs only in rockhouses, where the species is vulnerable to taking and vandalism. Publication of a critical habitat description and map in the **Federal Register** would draw attention to the remaining populations of *Solidago albopilosa*, making the species more vulnerable and increasing law-enforcement problems. Since almost all of the known plants occur on Federal land, any activity that could affect the continued existence of the species will be brought to the attention of the Service through the section 7 consultation process. The private landowners on whose land the species occurs have been notified of the presence of *Solidago albopilosa* and of the importance of protecting its habitat. Protection of this species' habitat will be addressed through the recovery process and through the section 7 jeopardy standard. Therefore, it would not be prudent to determine critical habitat for *Solidago albopilosa* at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(4) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not

likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

Effects upon the U.S. Forest Service will be minimal, consisting of the development and implementation of management practices designed to reduce visitor impacts to the most important rockhouses that support the plant and the careful planning of any future timber removal operations so that the continued existence of *Solidago albopilosa* is ensured. Involvement of the U.S. Army Corps of Engineers will occur only if the suspension of the Red River Lake Project is lifted. Development of plans designed to reduce the impacts of reservoir construction activities and recreational development, the construction of the dam, and the subsequent recreation activity, will be needed if the project is reauthorized in the future. Because of the geological and biological significance of the Red River Gorge and the official objection to the project by the Commonwealth of Kentucky, it is not anticipated that the project will be reauthorized.

The Act and its implementing regulations, found at 50 CFR 17.71 and 17.72, set forth a series of general trade prohibitions and exceptions that apply to all threatened plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71, will apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of commercial activity, sell, or offer for sale, this species in interstate or foreign commerce, or remove and reduce to possession the species from areas under Federal jurisdiction. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. Certain exceptions apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. It is anticipated that few trade permits would ever be sought or issued since the species is not common in the wild or in cultivation. Requests for copies of the regulations on plants and inquiries regarding them may be

addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 27329, Washington, DC 20038-7329 (202/343-4955).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an environmental assessment, under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

- Andreasen, M.L., and W.H. Eshbaugh. 1973. *Solidago albopilosa* Braun, a little known goldenrod from Kentucky. *Castanea* 38(2):117-132.
- Braun, E.L. 1942. A new species and a new variety of *Solidago* from Kentucky. *Rhodora* 44:1-4.

Kral, R. 1983. A report on some rare, threatened, or endangered forest-related vascular plants of the South. Vol. II. Technical Publication R8-TP2. USDA, Forest Service, Atlanta, Georgia. Pp. 1252-1255.

Martin, W.H. 1976. The Red River Gorge controversy in Kentucky: a case study in preserving a natural area. *Association of Southeastern Biologists Bulletin* 23(3):163-167.

Medley, M.E. 1980. Endangered and threatened plant status surveys. Unpublished report to the Southeastern region of the U.S. Fish and Wildlife Service under Contract No. 14-16-0004-79-105. 24 pp.

Authors

The primary author of this final rule is Robert R. Currie, Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801 (704/259-0321 or FTS 672-0321).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under Asteraceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Asteraceae—Aster family:						
<i>Solidago albopilosa</i>	White-haired goldenrod	U.S.A. (KY)	T	308	NA	NA

Dated: March 25, 1988.

Susan Recce,

Assistant Secretary for Fish and Wildlife and Parks.

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